ENGINEERING EDUCATION IN FIVE YEARS (or sooner!)

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1:30 to 2:30; 125 Reber Building

Engineering education is currently in a turbulent period. Chronic industry complaints about skill deficiencies in engineering graduates in an increasingly globalized environment, government commission reports supporting those complaints, and the ABET outcomes-based accreditation system all call for major transformations in the ways engineering curricula are structured, delivered, and assessed. An impending ability of on-line universities to compete successfully for college applicants heightens the impetus for reform. As might be expected, many faculty members and administrators are less than enthusiastic about proposed changes, arguing that the existing system functions well and needs no radical revision.

The ongoing debate involves four focal issues:

- How should engineering curricula be structured?
- How should engineering courses be taught and assessed (and what role will technology play)?
- Who should teach?
- How should the teachers be prepared?

This talk outlines the opposing positions on each of these issues—the traditional position, which has been the predominant approach of the past five decades, and the alternative position—and offers predictions about the probable outcomes.

Richard M. Felder is internationally recognized as one of the leaders in engineering education pedagogy and research. He has authored or coauthored over 300 papers on chemical process engineering and engineering education and presented hundreds of seminars, workshops, and short courses in both categories to industrial and research institutions and universities throughout the United States and abroad. Since 1991 he has co-directed the National Effective Teaching Institute under the auspices of the American Society for Engineering Education (ASEE). He is coauthor of Elementary Principles of Chemical Processes (3rd Edition, John Wiley & Sons, 2005), which has been used as the text for the introductory chemical engineering course by most American chemical engineering departments and at many international institutions for more than two decades.

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